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# **New modes of communication technologies and the reform of open and distance learning programmes: a response to the global crisis in teacher education and training**

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## **Abstract**

This paper has three main arguments. First, that there is a teacher crisis in many developing countries with millions of unqualified teachers entering the classroom. Secondly that if school achievement levels are to rise then appropriate teacher education and training must be available for all teachers. And thirdly that the scale of this is so great that school based forms of open and distance learning using new communication technologies are the only viable way forward. The paper argues for a basic one year foundation training programme, focused on the teaching of literacy, numeracy and science for all unqualified teachers entering schools (and within which University and college students could also participate). The paper advocates a six stage PRAISE process of policy development viz. Prioritisation, Resources, Assessment, Incentives, Support and Evaluation. Examples of initiatives associated with each of these stages are given and a call made for greater international co-operation to address the crisis.

## **Introduction**

“The assumption that teachers are not powerful is one of the biggest fallacies of our society. As a group they have a power which is second to none... It is they, the teachers now at work and going through Training College who are shaping what Tanzania will become, much more than we who pass laws, make rules, and make speeches!” (Julius Nyerere, 1972)

Teachers are at the core of attempts to expand, improve and reform educational opportunity. Yet in just about every country of the world there is concern, even a sense of crisis, around the future of the teaching profession. This unease is exhibited in wealthy and poor countries alike. California, facing an acute teacher recruitment problem in elementary schools, is appointing teachers without credentials (qualifications). England struggles to find sufficient secondary mathematics and science teachers. A third of the primary teachers in Sub-Saharan Africa are unqualified (some suggest the figure is nearer 50%). South and West Asia will need 3.5 million extra teachers by 2015 if Education for All (EFA) targets are to be met. In Africa the figure is 4 million.\*

The crisis around teachers represents a crisis for education and training systems. In this paper we want to argue that existing policies and practices, and the assumptions underpinning both, need significantly rethinking if we are to meet the needs of teachers in the coming decades.

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\* This data exists in various UNESCO monitoring reports and UNESCO statistical bulletins (see UNESCO, 2006)

We believe this to be the case in most parts of the world, but the problem is most acute in developing countries where resources are limited and the teaching forces most unstable. It is with this context that this paper addresses.

The first part of the paper will set out the situation of teaching today and the, often unacknowledged, problems endemic in many systems. In the second part of the paper we want to elaborate on the ways that teacher education and training systems could be reformed. We will argue that:

- a new foundation level teaching course needs to be made available to all unqualified and underqualified teachers; in systems where acute shortages exist this could extend to campus based students who would spend a first year at least working in schools;
- such a foundation level needs a ‘teacher education curriculum’ imaginatively designed, creatively taught and focussed on the basic education key learning areas (literacy, numeracy, some science);
- given the millions of unqualified and underqualified teachers in the school system, school based modes of supported open and distance learning, exploiting information and communication technologies (ICTs) are the only feasible way to make such provision.

We want to argue that policy makers must become more attuned to the new possibilities, especially where programmes are to be applied at scale. And our central argument is that new programmes of teacher education need to be embedded in (not an adjunct to) mainstream systems if they are to be successful. We set out six policy imperatives to make this happen:

- Prioritisation
- Resources
- Assessment
- Incentives
- Support
- Evaluation.

The PRAISE approach to policy and practice development, we suggest, could markedly improve the chances of higher quality teacher classroom performance, breaking the cycle of expanding provision, poor teaching and disappointing achievements that bedevil so many systems. We briefly list examples to exemplify each stage of the PRAISE process.

In making this analysis we are using a sort of Weberian ‘idea type’ approach to characterising the problem. None of the systems that we know well and have worked in for many years exhibit all the dysfunctional traits that we worry about (although some are close to it). And pockets of expertise and practice exist across the world. We believe, however, that a system or country somewhere needs to grasp the nettle and rethink the way the ever differentiating teaching profession is prepared.

## **Part 1 Context and crisis**

There are some straightforward assertions that can be made about the supply, retention and training of teachers, even if the picture on the ground is complex. Millions of extra teachers are urgently needed to achieve Education for All. One estimate says between 14-22.5 million globally (Global Campaign for Education 2006). Currently recruitment targets are being missed year on year. As a consequence, in many countries, unqualified adults are given teacher responsibilities with little, if any, pedagogic or subject training.

The scale of need is daunting (see M. Dembele and Bé Rammaj Miaro-II, 2003). Successive reports have pointed to the large numbers of unqualified teachers in schools and the difficulty of attracting new recruits. A survey of 11 eastern and southern African countries by UNESCO (2000) indicated that one-third of existing primary teachers were untrained. Lewin

(2002) has documented the shortfall in trained teachers that has arisen, and will become greater, if expansion to meet EFA targets continues.

The numbers and statistics change annually but the volume of need remains awesome. Whilst Sub-Saharan Africa is a significant focus for concern, particularly given the impact of HIV/AIDS on the teaching profession, other parts of the world exhibit a similar picture. In Afghanistan the school age population will grow by 34% over the next decade with a consequent huge demand for teachers (the current pupil teacher ratio is 65:1). In Pakistan primary pupil numbers will grow by 10% by 2015 but currently 34% of primary age children have no access to schooling. Unqualified teachers are also an issue beyond Sub-Saharan Africa. In Nepal 1 in 4 teachers are not certificated, in Bangladesh 1 in 5 (UNESCO, 2006). Given the importance of teachers it is surprising that teachers do not feature in the Millennium Development Goals. More recently, however, as concern about the quality of EFA expansion has risen so a belated recognition of the need to rethink policies towards teachers has emerged. The EFA Monitoring Report (2005), for example, gave prominence to teachers:

Achieving UPE alone calls for more and better trained teachers. Countries that have achieved high learning standards have invested heavily in the teaching profession. But in many countries teachers' salaries relative to those of other professions have declined over the last two decades and are often too low to provide a reasonable standard of living. Training models for teachers should be reconsidered in many countries to strengthen the school-based pre- and in-service training rather than rely on lengthy traditional, institutional pre-service training. (Report summary document, page 3)

But, we want to argue, training models for teachers are barely being reconsidered and school-based training needs are virtually ignored in most countries.

## **The orthodoxy of teacher education and training**

Teacher education systems vary from one country to another and from one region to another. The inheritance of Anglophone or Francophone traditions is one obvious example. There are, however, some characteristics of provision that cut across even this significant divide. First there is the preoccupation with initial training and the relative neglect of career-long professional development (particularly for unqualified, underqualified teachers). Initial training in many parts of the world is now structured around resource intensive, residential campus-based courses of three, even four years. As our opening section suggests, the consequence is a modest inflow of highly qualified teachers in many systems, and much larger numbers of entrants with few qualifications, sometimes working in only a volunteer capacity. There is also data to suggest that a large number of teacher graduates from long campus-based courses 'use' the teaching qualification to gain employment in higher paying, higher status occupations and never enter the classroom.

This description would not neatly fit every context. However, the characterisation would be familiar to many concerned with the future of the teaching profession in the contexts with which we are concerned. Policy systems, we believe, should make the training of those who 'missed out' on gold standard training an equal if not greater priority than is accorded to established systems. Ironically where new modes of foreshortened training is offered, as the UNESCO 2005 monitoring report suggests, it is often vigorously resisted by the teacher educator community (who rail against a drop in standards) and teacher unions (who see lower entry standards as a threat to the already weakened status of the profession).

Malawi, Nigeria, Tanzania and Zambia have, for example, looked at shorter forms of training, often with a more extensive school practice element allied to the use of open and

distance learning. But the resistance has been strong and the outcomes mixed. Again this is not unique to developing countries. The introduction of open learning teacher training programmes in the UK (by the Open University) and California (by California State University) in the 1990s was not with significant opposition from the conventional teacher training community. Both, however, weathered the storm and are now thriving. There are additional factors. Over prescriptive regulatory regimes (especially the one year full-time must equal two year part-time ruling); the lack of APL strategies, outmoded courses of little relevance to practicing teachers, assessment based on 'old style' examinations, and the lack of articulation between pre-service, upgrading and professional development programmes are just a few.

## **Rethinking the modes of teacher education and training**

Existing systems of teacher education and training need, we argue, to develop more holistic policy systems that embrace all teachers, especially those disadvantaged by minimal or no training. Currently in too many situations there is policy 'blind eye' approach to teacher quality (as if untrained teachers didn't exist). Looking specifically at EFA we would say that every teacher needs to have a foundation level of training that gives them the knowledge and experience to teach basic skills. The curriculum of such a course needs orientating with established routes to full qualification. A teacher undergoing a one-year part-time course, for example, would gain a qualification that would be the first rung of the ladder. But given the scarcity of training resource and opportunity it will be important that the curriculum of that training addresses core pedagogic issues. Such a new foundation curriculum should be imaginatively designed and imaginatively taught. There needs to be more thought to the 'pedagogy of teaching pedagogy'. Recent work we have been involved with which analyses teacher subject and pedagogic knowledge provides one starting point (Banks, Leach and Moon, 1999; Leach and Moon, 2008).

Across the world (Moon, 2003; 2007) there has been a move to making 'practice' a more central and important part of training. In systems where teacher supply is difficult and large numbers of unqualified teachers are entering the schools there is an argument to say that the first year of a college or university course should also be a school-based foundation programme. In that way:

- there would be an injection of motivational student teachers into the system;
- there would be an articulation between campus-based and school-based training;
- the training aims could move towards school focussed as well as individual development.

The American education policy analyst, Richard Elmore, in a much quoted article (Elmore, 1980) has suggested that educational policy makers, faced with a problem, usually use the wrong starting point in trying to come up with solutions. The starting point is often what should government do, rather than what change do we want at the point where the need is most acute. He has developed the concept of 'backward mapping', a process whereby you look at the 'place where the change has to happen first' and then work back to see what needs to be done to achieve such change.

We find that persuasive. And in the context of teachers we want to argue that the starting point should be the need for 'pedagogically knowledgeable teachers, particularly in terms of the teaching of basic literacy and numeracy skills'. If every child, particularly those in expanding EFA systems, had access to such a teacher we believe that achievement levels would soar. But they do not. Most teacher education and training policies begin the question 'how many new teachers can we train?'. And the usual answer is not as many as we want to with the consequent neglect of millions of para-professional teachers already working in the

schools. Our proposal for a common foundation programme would be one building block in a model of teacher education and training that directly addressed this problem.

## **The PRAISE approach to implementation**

Weaning policy makers (especially those at national level) off an orthodoxy that starts with the training system as is and then goes down the route of how many training places can be found is difficult. One starting point, following Elmore's analysis, might be looking at the lives of teachers in the schools where trained teachers are in great demand. We would suggest that intelligence on these contexts should help shape the prioritisation process that should begin any policy rethink.

### ***Prioritisation***

Policy makers need to analyse the overall teacher training context and rigorously adopt a process of prioritisation. Our argument in this paper is that custom and practice, rather than contemporary analysis, often determines priorities. And we argue that the priority should be classroom practice (with its proximity to pupil achievement).

(Example of governmental prioritisation, the Enlaces ICT programme in Chile [www.enlaces.cl](http://www.enlaces.cl))

### ***Resourcing***

Establishing new priorities requires rethinking existing resource flows. This can be painful. But innovative ideas about restructuring resources (for example making all campus-based training in year one school-based) can free up resources for 'new' uses. Utilisation of low and non-cost facilities and resources can help. Significant economies of scale could be achieved if new forms of ICT were embraced more rigorously.

(Example of low cost/no cost resource, the TESSA Teacher Education in Sub-Saharan Africa programme [www.tessafrica.net](http://www.tessafrica.net))

### ***Assessment***

In too many courses 'old style' written examinations are used extensively (and often at great cost). Little or no attempts are made to relate assessment to practice through formative modes of assessing, including the use of portfolios and competency models. Reform in this area is long overdue.

(Example of formative assess – South Africa, the University of Fort Hare's formative model of assessment in part-time and full-time teacher preparation courses.)

(Example of new style assessment.)

### ***Incentives***

We believe that a key to successful educational change is the provision of appropriate 'incentives' in this context for teachers to improve their practice. This does not necessarily mean salary reward, although that may be important. It can also be organisational rather than individual. But an incentive policy needs building into any initiative.

(Whilst we find a good array of incentive driven policies to attract teachers to teaching, or to work in rural areas – for example China's Guanyxi Province offers free higher level study for graduates prepared to teach in rural areas for two years – we find little evidence of non-salary incentives to promote education and training.)

## **Support**

No matter how well planned, no matter how sophisticated the technologies, we believe teacher development programmes need school-based support. Although this brings up costs it is essential support can come from a number of sources (retrained inspectorate staff, for example) and it does not have to be the equivalent of a highly trained teacher education specialist. Organisations such as COL and SAIDE and consortia such as TESSA can provide advice on the options that can be considered.

(In Bangladesh the English in Action (EiA) project, aimed at significantly improving the teaching of English in all sectors, is offering alternative forms of support, including integrating ICT into different aspects of the support system.)

## **Evaluation**

We see evaluation as playing a key formative role. The key question is, what forms of ongoing improvement can be made to consistently improve provision?

(The National Teachers Institute in Nigeria has a developed study of evaluation and quality assurance on all its programmes resulting in regular modification and update.)

The PRAISE analysis we believe to be the core one. And one that governments need to be involved in. Governments must have a persistence, however, often in the face of complexity (Fullan, 1990), as Chile had with the Enlaces programme. And governments have to be sure that their staff and the agencies they work through have the skills and expertise to see things through. There are some exciting possibilities. New players, new technologies and new priorities might shake up some rather moribund structures. Teachers deserve no less.

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